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EXAMINER	
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/686,537	CHUNG ET AL.	
	Examiner	Art Unit	
	LI B. ZHEN	2194	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *22 October 2009*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,3,5-7,10,11 and 14-36* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,3,5-7,10,11 and 14-36* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *10/22/2009*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. Claims 1 – 3, 5 – 7, 10, 11 and 14 – 36 are pending.

Information Disclosure Statement

2. The information disclosure statement (IDS) submitted on 10/22/2009 is in compliance with the provisions of 37 CFR 1.97 and 1.98. Accordingly, the information disclosure statement was considered by the examiner.

Drawings

3. The drawings were received on 3/23/2009. These drawings are acceptable.

Response to Arguments

4. Applicant's traversal of the restriction requirement is persuasive and the restriction is withdrawn.

5. Applicant's arguments filed 10/22/2009 have been fully considered but they are not persuasive. In response to the previous office action, applicant argues:

(1) Applicant's arguments the prior art does not teach "the report signal is used by the apparatus to verify whether the markup document has been successfully preloaded into the buffer, whether the markup document cannot be read due to an error, or whether the markup document is being read" now recited in claim 1.

(2) Kanazawa, Jones, and Lamkin '021 do not disclose or suggest "a markup, document to be preloaded into the buffer of the apparatus" as recited in claim 1.

(3) There is no basis whatsoever in Kanazawa and Jones for the Examiner's statement that "[t]he combination of Kanazawa and Jones would also include similar parameters in order to uniquely identify each HTML file" because it appears that the HTML files disclosed in steps S404-S407 in FIG. 23B of Kanazawa and column 17, line 64, through column 18, line 23, of Kanazawa relied on by the Examiner are uniquely identified by their URLs alone.

As to argument (1), examiner respectfully disagrees and notes that Kanazawa teaches verifying whether the markup document has been success fully preloaded into the buffer (col. 18, lines 2 – 13). The control program determines whether a HTML file corresponding to an URL has already been cached. The information used by the control program to make this determination corresponds to the report signal used by the apparatus to verify whether the markup document has been successfully preloaded into the buffer. In addition, Jones teaches a report signal is used by the apparatus to verify whether the markup document has been success fully preloaded into the buffer (checking a cache, memory, a file system I/O API, or some other location, to see if the file is already located local to the client; ¶68), whether the markup document cannot be read due to an error (preloader may discard the resource or chunk of a resource which it was currently trying to load when the preloader suspends itself from executing; ¶66),

or whether the markup document is being read (indicate how much of the resource or chunk it was able to preload; ¶66).

As to argument (2), examiner respectfully disagrees and notes that Kanazawa teaches caching HTML contents in a hard disk. Therefore, the hard disk cache in Kanazawa corresponds to the claimed buffer of the apparatus.

As to argument (3), examiner respectfully disagrees because Kanazawa teaches identifying markup documents using URLs (i.e. col. 11, lines 48 – 62) and identifying markup document based on attribute information related to parental information (i.e. col. 5, lines 55 – 63). It would be obvious to a person of ordinary skill in the art that Kanazawa and Jones would use similar parameters as discloses in Kanazawa to identify and select certain markup documents.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

7. **Claims 1, 3 and 5 – 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kanazawa et al. (US 6,580,870 B1; "Kanazawa") in view of**

Jones et al. (US 2003/0220984 A1; "Jones") and further in view of Lamkin et al (US 7,448,021 B1; "Lamkin").

8. As to claim 1, Kanazawa teaches a computer-readable storage medium usable with an apparatus comprising a buffer (abstract; col. 15 lines 46 – 57), the computer-readable storage medium having recorded thereon:

audio video (AV) data (abstract);

a markup document to be preloaded into the buffer of the apparatus to enable the apparatus to reproduce the AV data in an interactive mode selected by a user of the apparatus, wherein the markup document does not comprise the AV data or any other AV data (col. 15 lines 34 – 56; col. 17 lines 31 – 38; col. 20 lines 18 – 22); and

the apparatus to identify buffering state information of the markup document to be preloaded into the buffer of the apparatus, the buffering state information being used by the apparatus in reproducing the AV data in the interactive mode selected by the user (col. 15 lines 34 – 56; col. 17 line 64 – col. 18 line 23), wherein a report signal is used by the apparatus to verify whether the markup document has been success fully preloaded into the buffer (col. 18, lines 2 – 13). Although Kanazawa teaches the ability to identify the buffering state, it does not specifically teach that the identification is enabled by control information as claimed.

However, Jones teaches a buffer for preloading data (¶66, 72, 78, 88), identification is enabled by control information providing functionality (¶66, 68), the control information comprises an application program interface (API) that generates a

report signal used to identify a buffering state of the markup document (¶66, 68); and the report signal is used by the apparatus to verify whether the markup document has been success fully preloaded into the buffer (checking a cache, memory, a file system I/O API, or some other location, to see if the file is already located local to the client; ¶68), whether the markup document cannot be read due to an error (preloader may discard the resource or chunk of a resource which it was currently trying to load; ¶66), or whether the markup document is being read (indicate how much of the resource or chunk it was able to preload; ¶66).

It would have been obvious to one of ordinary skill in the art at the time Applicant's invention was made to combine these teachings because Kanazawa teaches identifying the buffering state and Jones teaches a way to enable identification of the buffering state that can be used when implementing the disclosure of Kanazawa. Although Jones discloses that the control information may be stored on computer-readable medium such as a DVD, Jones does not specifically disclose storing the control information on a computer-readable medium that also includes AV data and a markup document.

However, Lamkin teaches a method for combining video/audio content with programmatic content (e.g. web pages) and software (col. 6, lines 4 – 61 and col. 8, lines 37 – 44). Lamkin also teaches that additional directories, runtime software, and programmatic content are added to the above directory structure, as needed, in order to support additional hardware/software platforms, such as different types of personal computers and/or different operating systems, and consumer electronic devices, e.g.,

set top boxes and the like (col. 6, lines 55 – 62). As suggested by Lamkin, one of ordinary skill in the art would have been motivated to include control information as taught by Jones into the computer-readable medium (which includes AV data and markup documents) of Kanazawa. One of ordinary skill in the art would have been motivated to make the combination because this ensures that different types of personal computers and consumer electronic devices would have the necessary software to process the extra features (e.g. interlocking DVD video with HTML files) stored on the computer-readable medium.

9. As to claim 3, Kanazawa as modfied (see rejections of claims 1 and 2) teaches the API comprises an [obj].isCached(URL, resType) API that generates the report signal, where the URL is a parameter indicating a file path of the markup document and the resType is a parameter indicating an attribute of the markup document (Kanazawa: col. 15 lines 34 – 56; col. 17 line 64 – col. 18 line 23 and Jones: ¶66, 68). Kanazawa teaches determining whether a HTML file has been cached (steps S404 to S407; col. 17 line 64 – col. 18 line 23) but does not disclose the use of an API call. Jones discloses making an API call to determine whether a file is already located local to the client (paragraph 0068). The API call in Jones corresponds to the claimed isCached API and the URL and resType are interpreted as input parameters that are used to identify the markup document. The combination of Kanazawa and Jones would also include similar parameters in order to uniquely identify each HTML file. For example, Kanazawa teaches identifying markup documents using URLs (i.e. col. 11, lines 48 – 62) and

identifying markup document based on attribute information related to parental information (i.e. col. 5, lines 55 – 63). It would be obvious to a person of ordinary skill in the art that Kanazawa and Jones would use similar parameters as discloses in Kanazawa to identify and select certain markup documents.

10. As to claim 5, Kanazawa as modified teaches the control information further comprises an API that generates a fetch signal used to issue a command to preload the markup document (Kanazawa: col. 15 lines 34 – 56; col. 17 line 64 – col. 18 line 23).

11. As to claim 6, Kanazawa as modified teaches the API that generates the fetch signal returns a response indicating whether the command to preload the markup document has been successfully transmitted using the fetch signal (Kanazawa: col. 15 lines 34 – 56; col. 17 line 64 – col. 18 line 23).

12. As to claim 7, Kanazawa as modified teaches the control information further comprises an API that is used to determine whether preloading of the markup document is completed (Jones: ¶66, 68).

13. **Claims 10 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kanazawa in view of Jones and Lamkin and further in view of US 20020088011 A1 ("Collart").**

14. As to claim 10, Kanazawa teaches the interactive mode is a mode in which the AV data is interlocked with the markup document (col. 15 lines 32 – 45 and col. 11, lines 5 – 16); the apparatus is selectively operable in the interactive mode in which the AV data is interlocked markup document, and a non interactive video mode in which the AV data is displayed in the same manner as AV data recorded on a standard DVD (col. 6 lines 36 – 42; col. 15 lines 34 – 56); and the user of the apparatus selects between the interactive mode and the non interactive video mode (col. 15 lines 34 – 45). Kanazawa does not disclose the interactive mode is a mode in which the AV data is displayed in a display window defined by the markup document.

However, Collart teaches the interactive mode is a mode in which the AV data is displayed in a display window defined by the markup document (paragraphs 0117, 0121 – 0125) and the user of the apparatus selects between the interactive mode and the non interactive video mode (paragraph 0108).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine these teachings because this creates HTML-enhanced DVD-Video/Audio content that can play reliably across multiple playback platforms, ranging from computers to Internet-connected set-top devices (paragraph 0053 of Collart). This also allows content developers to create products that seamlessly combine the Internet and/or other DVD-ROM capabilities with DVD-Video to create a richer, more interactive, and personalized entertainment experience for their customers (paragraph 0054 of Collart).

15. As to claim 11, Kanazawa as modified teaches a startup markup document (Collart: paragraph 0101) separate from the markup document to be preloaded into the buffer of the apparatus and comprising preloading instructions enabling the apparatus to preload the markup document (Collart: paragraphs 0105, 0217 and 0219) into the buffer of the apparatus (Kanazawa: col. 11 lines 5 – 11; col. 12 lines 43 – 48; col. 17 lines 31 – 38); wherein the selection of the interactive mode by the user causes the apparatus to read the startup markup document from the computer-readable storage medium and execute the preloading instructions to preload the markup document into the buffer of the apparatus (Kanazawa: col. 11 lines 5 – 11; col. 12 lines 43 – 48; col. 15 lines 34 – 56; col. 17 lines 31 – 38).

16. **Claims 14 – 21 and 25 – 36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kanazawa; Koji et al. (US 6580870 B1; "Kanazawa") in view of Jones et al. (US 20030220984 A1; "Jones")**

17. As to claim 14, Kanazawa teaches an apparatus for reproducing audio video (AV) data using a markup document in an interactive mode selected by a user of the apparatus, comprising:

a buffer to buffer the markup document to enable the apparatus to reproduce the AV data in the interactive mode selected by the user (col. 15 lines 34 – 56; col. 17 lines 31 – 38); and

a buffer manager to manage the buffer to preload the markup document, the buffering state information being used by the apparatus in reproducing the AV data in the interactive mode selected by the user (col. 15 lines 34 – 56; col. 17 line 53 – col. 18 line 12).

Kanazawa fails to specifically teach "output buffering state information of the buffer in response to a report signal" as claimed. However, Jones teaches output buffering state information of the buffer in response to a report signal (¶66, 68). It would have been obvious to one of ordinary skill in the art at the time Applicant's invention was made to combine these teachings because Kanazawa teaches identifying the buffering state and Jones teaches a way to enable identification of the buffering state that can be used when implementing the disclosure of Kanazawa.

18. As to claim 15, Kanazawa as modified teaches a content decoder to interpret the markup document and output the report signal (Jones: ¶66, 68); wherein the buffer manager informs the content decoder of the buffering state information of the buffer in response to the report signal (Jones: ¶66, 68).

19. As to claim 16, Kanazawa as modified teaches the content decoder generates the report signal using an application program interface (API) (Jones: ¶66, 68).

20. As to claim 17, Kanazawa as modified teaches the content decoder generates the report signal using an API comprising a file path and/or an attribute of the markup document as a parameter (Kanazawa: col. 11, lines 48 – 62 and Jones: ¶66, 68).

21. As to claim 18, Kanazawa as modified teaches the content decoder generates the report signal using an [obj].isCached(URL, resType) API, where URL is a parameter indicating a file path of the markup document, and resType is a parameter indicating an attribute of the markup document (Kanazawa: col. 15 lines 34 – 56; col. 17 line 64 – col. 18 line 23 and Jones: ¶66, 68). Kanazawa teaches determining whether a HTML file has been cached (steps S404 to S407; col. 17 line 64 – col. 18 line 23) but does not disclose the use of an API call. Jones discloses making an API call to determine whether a file is already located local to the client (paragraph 0068). The API call in Jones corresponds to the claimed isCached API and the URL and resType are interpreted as input parameters that are used to identify the markup document. The combination of Kanazawa and Jones would also include similar parameters in order to uniquely identify each HTML file. For example, Kanazawa teaches identifying markup documents using URLs (i.e. col. 11, lines 48 – 62) and identifying markup document based on attribute information related to parental information (i.e. col. 5, lines 55 – 63). It would be obvious to a person of ordinary skill in the art that Kanazawa and Jones would use similar parameters as discloses in Kanazawa to identify and select certain markup documents.

22. As to claim 19, Kanazawa as modified teaches the buffer manager informs the content decoder of a buffering state of the markup document using an API (Jones: ¶66, 68).

23. As to claim 20, Kanazawa as modified teaches a content decoder to interpret the markup document (Kanazawa: col. 11, lines 15 – 39); wherein the buffer manager deletes the markup document from the buffer in response to a discard signal output from the content decoder (Jones: ¶49, 66).

24. As to claim 21, Kanazawa as modified teaches the content decoder generates the discard signal using a discard API (Jones: ¶49, 66 and 68).

25. As to claim 25, Kanazawa teaches a method of reproducing AV data in an interactive mode using a markup document, the method comprising:

buffering the markup document to preload the markup document (col. 15 lines 34 – 56; col. 17 lines 31 – 38; col. 20 lines 18 – 22). Kanazawa suggests indicating buffering state information (col. 15 lines 34 – 56; col. 17 line 64 – col. 18 line 23), but fails to specifically teach outputting the information in response to a report signal as claimed.

However, Jones teaches outputting buffering state information of the markup document in response to a report signal (¶66, 68).

It would have been obvious to one of ordinary skill in the art at the time Applicant's invention was made to combine these teachings because Kanazawa teaches identifying the buffering state and Jones teaches a way to enable identification of the buffering state that can be used when implementing the disclosure of Kanazawa.

26. As to claim 26, Kanazawa as modified teaches generating the report signal to determine the buffering state information of the markup document (Jones: ¶66, 68).

27. As to claim 27, Kanazawa as modified teaches generating of the report signal comprises generating the report signal using an application program interface (API) (Jones: ¶66, 68).

28. As to claim 28, Kanazawa as modified teaches the API includes at least one of a file path and an attribute of the markup document as a parameter (Kanazawa: col. 11, lines 48 – 62 and col. 5, lines 55 – 63; Jones: ¶66, 68).

29. As to claim 29, Kanazawa as modified teaches the generating of the report signal comprises generating the report signal using an [obj].isCached(URL, resType) API, where the URL is a parameter indicating a file path of the markup document and the resType is a parameter indicating an attribute of the markup document (Kanazawa: col. 15 lines 34 – 56; col. 17 line 64 – col. 18 line 23 and Jones: ¶66, 68). Kanazawa teaches determining whether a HTML file has been cached (steps S404 to S407; col. 17

line 64 – col. 18 line 23) but does not disclose the use of an API call. Jones discloses making an API call to determine whether a file is already located local to the client (paragraph 0068). The API call in Jones corresponds to the claimed isCached API and the URL and resType are interpreted as input parameters that are used to identify the markup document. The combination of Kanazawa and Jones would also include similar parameters in order to uniquely identify each HTML file. For example, Kanazawa teaches identifying markup documents using URLs (i.e. col. 11, lines 48 – 62) and identifying markup document based on attribute information related to parental information (i.e. col. 5, lines 55 – 63). It would be obvious to a person of ordinary skill in the art that Kanazawa and Jones would use similar parameters as discloses in Kanazawa to identify and select certain markup documents.

30. As to claim 30, although the specific values of 0, 1 and 2 are not taught, Jones teaches the outputting of the buffering state information includes returning a value in response to the markup document being successfully preloaded, returning a value in response to the markup document not being successfully preloaded, and returning a value in response to the markup document still being preloaded (¶ 66, 68).

31. As to claim 31, Kanazawa teaches reproducing the AV data in the interactive mode using the preloaded markup document (col. 15 lines 34 – 56).

32. As to claim 32, Kanazawa as modified teaches a method of managing a markup document for use in reproducing AV data in an interactive mode, the method comprising:

buffering the markup document to preload the markup document in response to a fetch signal (Kanazawa: col. 15 lines 34 – 56; col. 17 lines 31 – 38);

outputting a buffering state of the markup document in response to a report signal (Jones: ¶66 – 68);

staging the markup document for decoding in response to a retrieve signal (Jones: ¶66 – 68); and

deleting the markup document in response to a discard signal (Jones: ¶49, 66).

33. As to claim 33, Kanazawa teaches issuing a response indicating whether a command to preload the markup document included in the fetch signal has been successfully transmitted (col. 17, line 64 – col. 18, line 12).

34. As to claim 34, Kanazawa as modified teaches the outputting of the buffering state comprises returning a signal indicating whether preloading of the markup document has been completed (Jones: ¶66, 68).

35. As to claim 35, Kanazawa as modified teaches a method of managing a markup document for use in reproducing AV data in an interactive mode, the method comprising:

generating a fetch signal to preload the markup document (Kanazawa: col. 15 lines 34 – 56; col. 17 lines 31 – 38);

generating a report signal to determine a buffering state of the markup document (Jones: (¶66 – 68);

generating a retrieve signal to stage the markup document for decoding (Jones: (¶66 – 68); and

generating a discard signal to delete the markup document (Jones: ¶49, 66).

36. As to claim 36, Kanazawa teaches generating a release signal in response the markup document no longer being presented (Jones: ¶49, 66).

37. **Claims 22 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kanazawa in view of Jones and further in view of US 20020088011 A1 ("Collart").**

38. As to claim 22, Kanazawa teaches the interactive mode is a mode in which the AV data is interlocked with the markup document (col. 15 lines 32 – 45 and col. 11, lines 5 – 16); the apparatus is selectively operable in the interactive mode in which the AV data is interlocked markup document, and a non interactive video mode in which the AV data is displayed in the same manner as AV data recorded on a standard DVD (col. 6 lines 36 – 42; col. 15 lines 34 – 56); and the user of the apparatus selects between the interactive mode and the non interactive video mode (col. 15 lines 34 – 45). Kanazawa

does not disclose the interactive mode is a mode in which the AV data is displayed in a display window defined by the markup document.

However, Collart teaches the interactive mode is a mode in which the AV data is displayed in a display window defined by the markup document (paragraphs 0117, 0121 – 0125) and the user of the apparatus selects between the interactive mode and the non interactive video mode (paragraph 0108).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine these teachings because this creates HTML-enhanced DVD-Video/Audio content that can play reliably across multiple playback platforms, ranging from computers to Internet-connected set-top devices (paragraph 0053 of Collart). This also allows content developers to create products that seamlessly combine the Internet and/or other DVD-ROM capabilities with DVD-Video to create a richer, more interactive, and personalized entertainment experience for their customers (paragraph 0054 of Collart).

39. As to claim 23, Kanazawa as modified teaches an apparatus for recording and/or reproducing audio video (AV) data using a markup document in an interactive mode selected by a user of the apparatus before the apparatus reproduces any of the AV data (Collart: paragraph 0076), comprising:

an AV buffer to buffer the AV data (Kanazawa: col. 15 lines 34 – 56; col. 17 lines 31 – 38);

an AV reproduction engine to decode the AV data (Kanazawa: col. 15 lines 34 – 56; col. 17 lines 31 – 38);

an enhanced navigation (ENAV) buffer to preload the markup document before the apparatus reproduces any of the AV data to enable the apparatus to reproduce the AV data in the interactive mode selected by the user (Kanazawa: col. 15 lines 34 – 56; col. 17 lines 31 – 38);

an ENAV engine to identify buffering state information of the markup document and decode the markup document (Jones: ¶66, 68), the buffering state information being used by the apparatus in reproducing the AV data in the interactive mode selected by the user (Collart: paragraphs 0117, 0121 – 0125); and

an I/O manager to obtain the markup document (Kanazawa: col. 15 lines 34 – 56; col. 17 lines 31 – 38).

40. **Claim 24 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kanazawa, Jones and Collart and further in view of Silberschatz.**

41. As to claim 24, Kanazawa teaches obtaining the markup document, but fails to specifically teach blocked I/O and unblocked I/O. However, Silberschatz teaches the I/O manager uses a blocked I/O method to obtain data from a data storage medium (page 418 ¶5) and an unblocked I/O method to obtain data from a network (page 418 ¶2). It would have been obvious to one of ordinary skill in the art at the time Applicant's

invention was made to combine these teachings because Kanazawa teaches what data needs to be transferred and Silberschatz teaches how to implement the data transfers.

CONTACT INFORMATION

42. Any inquiry concerning this communication or earlier communications from the examiner should be directed to LI B. ZHEN whose telephone number is (571)272-3768. The examiner can normally be reached on Mon - Fri, 8:30am - 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hyung Sub Sough can be reached on 571-272-6799. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Li B. Zhen/
Primary Examiner, Art Unit 2194